



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/723,563

11/28/2000

U-Ming Ko

TI-29632

5590

7590

09/22/2004

RONALD O. NEERINGS
Texas Instruments Incorporated
Mail Station 3999
P.O. Box 655474
Dallas, TX 75265

EXAMINER

WILLIAMS, ALEXANDER O


ART UNIT

PAPER NUMBER

2826

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/723,563	Applicant(s) KO, U-MING	
	Examiner Alexander O Williams	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42-63 is/are pending in the application.
- 4a) Of the above claim(s) 52-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2826

Serial Number: 09/723563 Attorney's Docket #: TI-29632

Filing Date: 11/28/00;

Applicant: Ko

Examiner: Alexander Williams

Applicant's Amendment filed 7/19/04 to the Amendment/Election of Species of electrostatic discharge device (claims 42-51) filed 7/23/03 has been acknowledged.

This application contains claims 52 to 63 drawn to an invention non-elected without traverse.

Claims 1-41 have been canceled.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 42 to 51 are rejected under 35 U.S.C. § 102(e) as being anticipated by Andresen et al. (U.S. Patent # 6,147,538).

In claim 42, Andresen et al. (figures 1 to 8) specifically figures 1, 5 and 6 show an integrated circuit **10** having a plurality of I/O modules **101,107**, comprising: a substrate **500**; a bond pad **Z1,113** disposed on said substrate; an electrostatic discharge device (**within 501**),**120** disposed in the substrate, the electrostatic discharge device being at least partially beneath the bond pad; circuitry (inherit) disposed in said substrate; an I/O buffer **176,156** disposed in the substrate and connected to the bond pad for providing communication between the bond pad and said circuitry said circuitry positioned substantially adjacent to both the electrostatic discharge and the I/O buffer.

Art Unit: 2826

(24) FIG. 5 is a topological diagram of transistors N1, and N2. Only a portion of semiconductor substrate 500 is depicted. Remaining circuitry of integrated circuit 10 is formed on portions of semiconductor substrate 500 not shown. A p-well 501 is formed within the substrate and contains the ESD structure. The impurity concentration of p-well 501 is selected to optimize the transistor characteristics of the ESD protection structure, however, the CTNMOS protection structure according to aspects of the present invention is tolerant of a wide range of p-type impurity concentration in p-well 501. P+ ring 350 encloses a region 510 of the semiconductor substrate. P+ ring 350 is not tied to the V.sub.SS reference bond pad. P+ substrate contacts, such as contact 515, are spaced apart from P+ ring 350 a distance 517 so that region 510 can be voltage pumped by pump transistor N2, as discussed earlier.

Response

Applicant's arguments filed 7/19/04 have been fully considered, but are moot in view of the new grounds of rejections detailed above.

The listed references are cited as of interest to this application, but not applied at this time.

Field of Search	Date
U.S. Class and subclass: 257/786,784,357,723,777,691,203,723,725,360,401,205- 207,382,377,409,173,362	11/4/02 11/20/03 9/15/04
Other Documentation: foreign patents and literature in 257/786,784,357,723,777,691,203,723,725,360,401,205- 207,382,377,409,173,362	11/4/02 11/20/03 9/15/04
Electronic data base(s): U.S. Patents EAST	11/4/02 11/20/03 9/15/04

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander O Williams whose telephone number is (571) 272 1924. The examiner can normally be reached on M-F 6:30-7:00PM.

Art Unit: 2826

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272 1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AOW
9/15/04



Primary Patent Examiner
Alexander O. Williams